Amended Claims:

Claims 1-10 (cancelled)

11. (New) A method for deconvolving far-field optical images for improved image resolution, comprising:

employing near-field microscopy as a point source that is positioned to provide images of specific regions of a sample corresponding to specific pixels in a far field imager, the near-field microscopy being movable with respect to a surface of the sample to obtain near-field optical data;

recording near-field data for the relative height of the point source with respect to the sample surface and near-field data for the location of the borders of the sample;

obtaining far-field optical image data corresponding to the sample; recording said far-field optical image data simultaneously with the data obtained from the near-field optical microscopy; and

incorporating the far-field and the near-field optical data in deconvolution algorithms using the data from the near-field imaging for added precision of the far-field imaging or as a constraint with the deconvolution algorithms to produce a deconvolved super-resolution image

12. (New) The method of claim 11, further including obtaining the near-field optical microscopy data in simultaneous channels.

13. (New) The method of claim 12, further including fully integrating the far-field optical data with the near-field optical data.

14. (New) The method of claim 11, further including obtaining said far-field optical image data through a lens.

15. (New) The method of claim 14, further including determining a point-spread function of the lens prior to obtaining said near-field and said far-field data.

16. (New) The method of claim 15, wherein determining the point-spread function of the lens includes determining the difference between real and ideal images of a sample to determine a blurring function of the lens.

17. (New) The method of claim 16, further including determining the point spread function of the lens with atomic force topography information from said sample.

18. (New) The method of claim 11, wherein employing near-field optical microscopy includes scanning said sample with subwavelength resolution to define optical contrast points on said sample.

19. (New) The method of claim 11, wherein obtaining said far-field optical image data includes non-linear optical imaging.

20. (New) The method of claim 11, wherein recording far-field and near-field optical images includes recording interdigitated and correlated sets of image data.

21. (New) The method of claim 11, further including determining a difference between the deconvolved optical image and one or more points of the near-field image to compute an error value for directing the computation of a newly deconvolved image.

22. (New) The method of claim 21, wherein the deconvolution is a closed loop in which the error value is minimized.

23. (New) The method of claim 11, wherein employing near-field microscopy includes employing a scanned optical probe.

24. (New) The method of claim 11, wherein employing near-field microscopy includes scanned probe imaging combined with atomic force imaging to provide two near-field images.

25. (New) The method of claim 11, further including combining near-field and far-field imaging without obstructing the far-field imaging to produce fully integrated data sets for deconvolving the optical images.